Lakshmi Kant Bajpai, Ph.D.
kant@ufl.edu ; lkbajpai@hotmail.com.
352-367-8538(Home) 352-846-1319 (Work)

716, SW 16th Ave, Apt # 212,
Gainesville Florida-32601, USA

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Executive Summary

Seven years of Research Experience including corporate and academic research. Ph.D. in Synthetic Medicinal Chemistry from the Prestigious Research Laboratory (CDRI) in India. Published eight research papers in international journals of repute. Developed process for the production of Amlodipine, Simvastatin, involving the use of dry reactions, in addition to the impurity characterization and the synthesis during the process development. Worked on the new drug development work of Asthma. Developed and validated the analytical method for the assay of Propofol in human plasma and several other small drug molecules. Extensive experience in the isolation and Quantitation of drug molecules and their metabolites in the biological matrices using LC/MS/MS. Certified by Applied Biosystems for LC/MS/MS operation and MS Identification of Metabolites. Experienced to work in a multi-disciplinary team to solve the challenging problems in biomedical areas using LC/MS/MS in the light of organic chemistry background.

Professional Experience

University of Florida,Gainesville,FL 32611, USA **2002 - Present**

Post Doctoral Fellow **(**Department of Anesthesiology, College of Medicine, Mentor: Dr. Don M. Dennis)
Acheivements :

- Developed methods for the isolation of drug molecules from complex biological medias.
- Developed LC/MS/MS methods for the quantitative estimation of various drug molecules in simple and complex media (plasma, blood) and their metabolites.
- Published one and communicated two papers in international journals and presented at international conference.

University of Florida, Gainesville, FL 32611, USA **Oct 2001- July 2002**
Post Doctoral Fellow **(**Department of Chemistry, Mentor: Dr. Dennis Wright)
Achievements:

- Synthesis of Erinasine (a cyathin derivative), a bioactive natural product.
- Improvement of the yields and scale up of the crucial intermediates for the synthetic route.

Ranbaxy Research Laboratories New Delhi, India **Sep 2000- Sep 2001**
Research Scientist (New Drug Development and Research)
Achievements:

- Design and Synthesis of new class of molecules for antiasthma (VLA-4) activity.

Wockhardt Research Center, Aurangabad, India **Nov 1997- Sep 2000**
Research Scientist (Process Development lab)
Achievements:

- Process development for the cardiovascular drug Amlodipine.
- Process development for the antihypercholestrolimic drug Simvastatin.

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- Characterization and the synthesis of the impurities for the above drugs.

Education

Central Drug Research Institute, Lucknow, India (One of the top Gov. Research lab)July 1992- Nov 1997

(Department of Medicinal Chemistry; Mentor Dr A. P. Bhaduri)
Ph.D. in Medicinal Chemistry
Achievements:

- Synthesis of Antileishmanial and spermicidal agents
- During thesis work got some novel chemical observations which have been explored in details and published

- Chemical reactions like Michael reaction, Diels alder reaction, 1,3-dipolar cycloaddition reactions, Enzymatic reactions, Hydrogenation etc.
- Published seven research Papers in international journals.

Banaras Hindu University (One of the 3 top most public University in India) **July 1990 – June 1992**

Master of Science in Organic Chemistry

Banaras Hindu University (One of the 3 top most public University in India) **July 1987 – June 1990**

Bachelor of Science in Chemistry

Relevant Training

- Basic training for running and the maintenance of the API 4000 LC/MS/MS system from Applied Biosystems at Boston USA.

- Advanced training on the MS identification of metabolite-Analyst course at Applied Biosystems at Boston USA.

Awards and Scholarships

- 1995-1997 Senior Research Fellowship, Council of Scientific and Industrial Research (CSIR), Govt. of India, New Delhi
- 1994-1995 Research Assistantship, Anti-fertility Drug Development Scheme, Ministry of Health & Family Welfare. Govt. of India, New Delhi.
- 1992-1993 Research Assistantship (INDO-US. CONRAD Scheme) Dept. Of Biotechnology, Govt. of India, New Delhi

Affiliations:

Member of American Association of Pharmaceutical Scientists.

Our poster on “Propofol analysis in air” has been published as a featured article on Ionseparations.com.

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Publications

1. Unusual denitrohydrogenation of tertiary allylic nitro compounds during hydrogenation. ***L.K.Bajpai***, S.Batra and A.P.Bhaduri, *Synthetic Communications* 25(12), (1995), 1765

2. Protease induced novel ring contraction reaction of 1,3-oxazin-4-one derivatives. ***L.K.Bajpai*** and A.P. Bhaduri, *Journal of Molecular Catalysis B Enzymatic* 1(1996), 103

3. Novel skeletal rearrangement of 2-nitro-1, 3-diene system to 1-nitro, 3-dine system; An easy access to a new class of cyclohexene derivative, ***L.K.Bajpai*** and A.P. Bhaduri, *Synthetic Communications* 26(10), (1996), 1894

4. Novel oxidation of substituted pyrrolidines to maleimides by NBS. ***L.K.Bahpai*** and A.P.Bhaduri, *J.Chem.Res*, (S),(1996),522

5. Effect of Lithium cationisation on the oxygen atom transfer from nitro group to the double bond during CID in certain substituted b-nitrostyrences. K.P. Madhusudan, ***L.K.Bajpai*** and A.P. Bhaduri, *Rapid Communications in Mass Spectrometry* Vol-11,(1997),1263

6. A convenient synthesis of 3-nitro, 2-pyrrolines: Regioselective oxidation of substituted pyrrolidines to pyrrolines. ***L.K.Bajpai*** and A.P. Bhaduri, *Synthetic Communications* 28(1), (1998), 181.

7. In search of new chemical entities with spermicidal and anti HIV activities. Seema Srivastava, ***L. K. Bajpai***, Sanjay Batra, Amiya P.Bhandari, J.P.Maikhuri, Gopal Gupta and J.D. Dhar *Bio-organic and Medicinal Chemistry*, 7, (1999), 2607

8. Advances in propofol measurement in human plasma:Solid Phase Extraction with Oasis HLB cartridge and subsequent quantitation with LC/MS/MS. ***L.K. Bajpai***, Manoj Varshney, Christoph S. Seubert and Donn M. Dennis. *Journal of Chromatography* B, 810(2),(2004), 291.

9 Long-term changes in glutamatergic synaptic transmission in phenylketonuria (pah^{emu2}) mice. Glushakov AV, Glushakov O, Manoj Varshney, ***L.K.Bajpai***, Sumners C, Laipis PJ, Embury JE, Baker SP, Otero DH, Dennis DM, Seubert CN, Martynyuk AE.. *Brain (*Accepted*).*

10. .Mass spectral fragmentation of intravenous anesthetic Propofol and other structurally related phenols in APCI and ESI modes. ***L.K. Bajpai***, Manoj Varshney,Christoph S. Seubert and Donn M. Dennis. *Journal of American society For Mass Spectrometry* (Communicated).

11. Monitoring the inorganic precursors of reaction relevant to the human host airway defense as novel biomarkers for cystic fibrosis by ESI/MS/MS. Frank A. Kero, ***L.K.Bajpai***, Richard A. Yost, Greg Conner (Manuscript in preparation)

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Presentation

- In search of radical stabilizing pharmacophores for designing antileishmanial agents. R. C. Gupta, ***L. K. Bajpai*** and A. P. Bhaduri, Global Challenges in Drug Development, 1994, Lucknow, India

- Chemistry of 2-nitro-1, 3-dienes**, *L. K. Bajpai*** and A. P. Bhaduri, 14th Annual Conference of Indian Council of Chemists, 1995, Bombay, India

- An LC/MS/MS Method to Measure Propofol in Air. ***L.K.Bajpai***, Manoj Varshney,Timothy E. Morey,Rich Melker and Donn M. Dennis. American Society for Mass Spectrometry, 2004,Nashville, USA

References provided upon request.